Merritt Island Hunt Impoundment Conditions

November 1, 2013

Last year's waterfowl season was better than expected. We had sufficient rains to reach target salinity levels and waterfowl food production. Hunter success was very high and the harvest included an amazing diversity of 23 species of ducks. Hopes were high that we had turned the corner on our extended drought and habitat conditions would continue to improve. However, early signs of a normal rainy season fizzled out and with a lack of tropical systems passing through, the refuge is now 10 inches below its average annual rainfall total.

The improvements made to the Shilohs two years ago are now paying off as they are now the bright spot on the refuge. Shiloh 5 and Shiloh 3 salinity levels are low and waterfowl food production is high. The newly installed water control structures and a lack of vandalism have allowed fresh water to flow down into Shiloh 2 and Shiloh 1, which are now in better shape than they have been in years. However, water levels in these impoundments are below target elevations so if drought conditions persist, high salinity and hunter access could become a problem.

The Area 1 impoundments were in good shape early in the year. They held low salinity water through the dry season and managed to capture some of the early season rains. Waterfowl food production in Peacocks Pocket and Catfish Creek impoundments was good through August but the lack of rain eventually took its toll on water levels. When the October Rise (seasonally higher lagoon levels) arrived the impoundments were inundated with lagoon water which had higher than normal salinity levels due to the lack of rainfall. The input of salty water knocked back the submerged aquatic vegetation in the Area 1 impoundments. Some seeds and chara fruiting bodies may persist through the waterfowl season but additional aquatic vegetation is not expected.

L pond, M pond and the Wildlife Drive impoundments all received minimal rainfall and extensive lagoon pumping to control mosquitos. Waterfowl food production was minimal in most of these impoundments. The only exception was T-10-IN which has some food production.

The Biolab Impoundments are in particularly bad shape. Water levels were low, salinity was high, and food production was minimal prior to early teal season and the October Rise. High lagoon levels in October allowed impoundment levels to rise due to inputs through the flap gates but this only added additional salinity to the impoundments. As the dry season progresses, increasing salinity levels may necessitate management actions to prevent damage to the habitat.

The following is a brief summary of habitat conditions within individual impoundments opened to waterfowl hunting. Water levels and salinity for November 2012 are included for comparison.

- Bio-Lab (T-27A) - Current water level = 1.6, salinity 49 ppt (1.9, 15 ppt 11/2012). Salinity in this impoundment has been high since spring and food production has been minimal.

- Max Hoeck Creek (T-27B) - Current water level = 1.5, salinity 55 ppt (1.9, 15 ppt 11/2012). Salinity in this impoundment has been high since spring and food production has been minimal.

- East Gator Creek (T-24B) - Current water level = 1.0, salinity 46 ppt (1.3, 20 ppt 11/2012). Salinity in this impoundment was higher than the other Area 1 impoundments during the growing season so submerged aquatic vegetation is minimal.

- Catfish Creek (T-24C) - Current water level = 1.7, salinity 31 ppt (1.8, 7 ppt 11/2012). Waterfowl food production was good through August but submerged aquatics died back when salinities jumped in October. Some seeds and chara fruiting bodies may persist through the waterfowl season but additional aquatic vegetation is not expected.

- Peacocks Pocket (T-24D) - Current water level = 1.7, salinity 33 ppt (1.8, 8 ppt 11/2012). Waterfowl food production was good through August but submerged aquatics died back when salinities jumped in October. Some seeds and chara fruiting bodies may persist through the waterfowl season but additional aquatic vegetation is not expected.

- Gator Creek - Current water level = 1.2, salinity 33 ppt (1.7, 12 ppt 10/2012). Waterfowl food production was good through August but submerged aquatics died back when salinities jumped in October. Some seeds and chara fruiting bodies may persist through the waterfowl season but additional aquatic vegetation is not expected.

- Shiloh 5 - Current water level = 1.4, salinity 10 ppt (2.0, 13 ppt 11/2012). Target salinity level was reached in time to produce abundant waterfowl food. However, water level is below target elevation so if drought conditions persist, high salinity and hunter access could become a problem.

- Shiloh 3 - Current water level = 1.4, 18 ppt (2.0, 15 ppt 11/2012). Production of chara and ruppia are good and this impoundment has had good early use by teal and mottled ducks. However, water level is below target elevation so if drought conditions persist, high salinity and hunter access could become a problem.

- Shiloh 2 - Current water level = 1.4, salinity 22 ppt (1.8, 17 ppt 11/2012). Target salinity level was reached in time to produce abundant waterfowl food. However, water level is below target elevation so if drought conditions persist, high salinity and hunter access could become a problem.

- Shiloh 1 - Current water level = 1.4, salinity 30 ppt (1.8, 25 ppt, 11/2012). Salinity was high through most of the growing season but the impoundment has benefited from recent improvements.

- Duck Roost - Current water level = 1.5, salinity 45 ppt (1.6, 34 ppt 11/2012)

- M Pond - Current water level = 1.8, salinity 36 ppt (1.8, 10 ppt 11/2012). Salinity was high through most of the growing season and waterfowl food production was minimal.

- L Pond - Current water level = 1.8, salinity 45 ppt (1.8, 3 ppt 11/2012). Salinity was high through most of the growing season and waterfowl food production was minimal.

Beach Area Impoundments – Due to their limited watersheds, some of these impoundments have been greatly affected by the droughty conditions of previous years. The most severely impacted impoundment, V-3 (aka “Glory Hole”) has lost much of its emergent vegetation, and has minimal SAV. V-3 (Glory Hole) and V-4 (Cat Hammock) are currently open to the lagoon. T-

44 (Hidey Hole), T-43 (Pardon Island), and T-40 (Cucumber) are closed to the lagoon but salinity is high and food production in minimal.